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VANADIUM IN NOVEMBER 2004

Reported domestic consumption of vanadium in November 2004 was about 2% less than that of the previous month and was about 21% more than that of November 2003, according to the U.S. Geological Survey. Year-to-date consumption of vanadium from January through November was about 21% more than during the same period in 2003. Consumer stocks of vanadium, in all forms, were 238 metric tons (t) at the beginning of 2004 and 304 t at the end of November.

According to Ryan's Notes (2004d), U.S. ferrovanadium (FeV) prices ranged from $16.219 to $16.969 per pound of vanadium content in November, as compared with $12.522 to $13.039 in October. European FeV prices ranged from $37.125 to $38.875 per kilogram in November, as compared with $28.222 to $29.278 in October. Vanadium pentoxide (V_2O_5) prices ranged from $7.688 to $8.188 per pound in November as compared with $5.889 to $6.306 in October.

Speaking at the Ryan's Notes Ferroalloys Conference in October 2004, an official of Strategic Minerals Corp. suggested that world vanadium capacity was just over 113,000 t (250 million lb) of V_2O_5, while demand in 2004 will be almost 91,000 t (200 million lb). He stated that demand outstripped supply in both 2003 and 2004 but that the deficit was made up from stocks, which had risen to about 23,000 t (50 million lb) in 2002. Even with the drawdown of stocks, the official did not anticipate supply problems for vanadium, as none of the supply sources have been operating at capacity. He estimated capacity utilization to be 80% for steel slag, 80% for vanadium ore, 82% for oil residues, and 63% for spent catalysts (Ryan's Notes, 2004a).

Xstrata Plc. decided to permanently close its Vantech vanadium mine in South Africa, which had been on care and maintenance since January 2004. Xstrata reached its conclusion after determining the investment required to develop the Steelpoordrift deposit and evaluating higher ongoing operating costs, the sustained strength of the South African rand, and their view that the current price for vanadium was not sustainable in the long term. Xstrata's South African vanadium production decreased only marginally in 2004 because production at its other mine, Rhovan, reached record levels (Ryan's Notes, 2004c).

CRI International announced it might close its CS Metals catalyst recovery plant in Convent, LA, if a buyer wasn't found by the end of the year. In November, the company was in discussion with a potential buyer capable of completing necessary plant upgrades. The plant has been beset with technical problems and soft metal prices since it opened in October 2000. CRI decided to divest service operations related to catalysts in order to focus on making catalysts and selling catalyst-related technology. A likely suitor was said to be Gulf Chemical and Metallurgical Corp., which operates a catalyst recycling plant in Freeport, TX (Ryan's Notes, 2004b).

References Cited

Ryan's Notes, 2004a, Elastic V supply can meet demand: Ryan's Notes, v. 10, no. 44, November 1, p. 3.
Ryan's Notes, 2004b, Ferroalloy notes: Ryan's Notes, v. 10, no. 47, November 22, p. 5.
Ryan's Notes, 2004c, Xstrata to permanently shut Vantech: Ryan's Notes, v. 10, no. 45, November 8, p. 1.
Ryan's Notes, 2004d, [untitled]: Ryan's Notes, v. 10, no. 49, December 6, p. 4.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM[1]

(Kilograms, contained vanadium)

	2003		2004			
			October		November	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovanadium[2]	2,770,000	201,000	310,000 r	205,000 r	303,000	296,000
Vanadium-aluminum alloy	W	W	W	W	W	W
Other[3]	188,000	37,400	18,200	8,750	18,900	7,720
Total	2,960,000	238,000	328,000 r	214,000 r	322,000	304,000

rRevised. W Withheld to avoid disclosing company proprietary data; included with "Other."
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.
[3]Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol W.

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE[1]

(Kilograms, contained vanadium)

		2004		
	2003	October	November	Year to date[2]
Steel:				
Carbon	783,000	92,000 r	79,000	888,000
High-strength low-alloy	924,000	97,700	93,800	1,060,000
Stainless and heat-resisting	64,500	5,360	5,360	59,000
Full alloy	799,000	92,500	90,300	970,000
Tool	143,000	22,200	33,800	202,000
Total steel	2,710,000	310,000 r	302,000	3,180,000
Superalloys	10,000	821	811	7,500
Miscellaneous and unspecified[3]	235,000	17,800	18,600	189,000
Total consumption	2,960,000	328,000 r	322,000	3,370,000

rRevised.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes revisions to prior month's data.
[3]Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U.S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND VANADIUM METAL, INCLUDING WASTE AND SCRAP[1]

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2003	232,000	$425,000	186,000	$2,850,000
2004:				
August	58	2,800	9,850	303,000
September	68	4,080	143	81,700
October:				
Year to date	19,100	66,700	28,600	1,510,000
Exports:				
2003	6,710,000	16,700,000	201,000	3,910,000
2004:				
August	633,000	1,460,000	26,800	544,000
September	624,000	1,610,000	46,700	925,000
October:				
Australia	8,900	30,000	--	--
Canada	395,000	936,000	--	--
Costa Rica	520	6,750	--	--
Germany	--	--	227	38,000
Japan	2,120	7,960	9,990	232,000
Mexico	1,340,000	2,620,000	--	--
Switzerland	--	--	18	55,200
Taiwan	10,400	47,400	--	--
Thailand	14,900	68,000	--	--
United Kingdom	16,000	69,900	840	28,700
Total	1,790,000	3,780,000	11,100	354,000
Year to date	7,800,000	17,100,000	246,000	4,500,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND OTHER OXIDES AND HYDROXIDES OF VANADIUM[1]

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride)[2]		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2003	1,360,000	$14,300,000	474,000	$3,610,000	38,700	$769,000
2004:						
August	186,000	3,750,000	107,000	915,000	--	--
September	216,000	4,620,000	17,500	270,000	6,940	204,000
October:						
Canada	19,600	480,000	--	--	--	--
China	40,000	55,700	--	--	--	--
Czech Republic	113,000	2,470,000	--	--	--	--
South Africa	--	--	60,200	619,000	--	--
Swaziland	78,800	1,170,000	--	--	--	--
Taiwan	--	--	7,250	143,000	--	--
Tajikistan	22,500	509,000	--	--	--	--
Total	274,000	4,680,000	67,500	762,000	--	--
Year to date	2,580,000	49,600,000	909,000	7,240,000	120,000	1,640,000
Exports:						
2003	397,000	5,420,000	185,000	1,540,000	284,000	2,450,000
2004:						
August	--	--	4,360	49,300	48,700	313,000
September	7,560	228,000	1,500	18,800	26,600	168,000
October:						
Canada	--	--	--	--	14,500	133,000
Japan	--	--	--	--	309	2,750
Mexico	8,000	192,000	4,000	57,200	--	--
South Africa	--	--	--	--	16,000	74,100
Trinidad and Tobago	--	--	--	--	1,860	10,400
Venezuela	--	--	1,380	13,100	--	--
Total	8,000	192,000	5,380	70,300	32,600	220,000
Year to date	141,000	3,280,000	231,000	1,850,000	521,000	3,800,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG[1]

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
2003	4,940,000	$3,030,000	14,300,000	$3,140,000	369,000,000	$6,190,000
2004:						
August	288,000	535,000	607,000	91,300	10,900,000	811,000
September	324,000	789,000	780,000	144,000	2,000,000	448,000
October:						
Canada	--	--	330,000	69,200	211,000	717,000
Mexico	355,000	792,000	--	--	--	--
South Africa	--	--	--	--	1,240,000	417,000
Total	355,000	792,000	330,000	69,200	1,460,000	1,130,000
Year to date	3,730,000	7,100,000	10,400,000	1,890,000	172,000,000	8,510,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS[1]

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2003	--	--	72,900	$902,000
2004:				
August	--	--	6,280	70,700
September	--	--	2,020	44,000
October:				
Germany	--	--	652	22,700
Total	--	--	652	22,700
Year to date	500	19,100	54,000	844,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.